

WHAT IS CLAIMED IS:

1. A printing form comprising:
a surface having inorganically bonded silicon and a pattern composed of hydrophilic and hydrophobic regions, the hydrophilic regions having a first chemical state and the hydrophobic regions having a second chemical state differing from the first state;
in at least one of the hydrophobic regions, the surface having silicon atoms, at least one organic terminal group being attached to the silicon atoms of the at least one hydrophobic region in each instance, the silicon atoms being substituted not only exactly with one CH₃ group or with one OCH₃ group.
2. The printing form as recited in claim 1 wherein the surface is made of amorphous, nanocrystalline, polycrystalline or crystalline silicon, or a stoichiometric or non-stoichiometric silicon ceramic containing oxygen and/or nitrogen.
3. The printing form claim 1 further comprising a metallic carrier, the surface being an amorphous film on the metallic carrier.
4. The printing form as recited in claim 1 wherein, in at least one of the hydrophilic regions, the surface has silicon atoms, oxide and/or hydroxy terminal groups and/or silyl amine and/or aldehyde terminal groups and/or carboxyl terminal groups being attached to the silicon atoms.
5. The printing form as recited in claim 1 wherein, in at least one of the hydrophobic regions, the organic terminal groups are unsubstituted and/or partially chlorinated and/or completely chlorinated and/or partially fluorinated and/or completely fluorinated terminal groups.
6. The printing form as recited in claim 5 wherein, in at least one of the hydrophobic regions, the organic terminal groups each have a chain of a plurality of carbon atoms, to which CH₃ or CF₃ groups are attached.
7. The printing form as recited in claim 1 wherein, in at least one of the hydrophobic regions, the organic terminal groups have fewer than 21 carbon atoms.

8. The printing form as recited in claim 1 wherein, in at least one of the hydrophobic regions, the organic terminal groups are attached by an Si-C bond and/or an Si-O-C bond and/or an Si-O-Si-C bond.
9. The printing form as recited in claim 1 wherein, in at least one of the hydrophobic regions, silicon atoms at the surface carry a plurality of organic terminal groups.
10. The printing form as recited in claim 1 wherein, in at least one of the hydrophobic regions, silicon atoms carry three methyl groups or an O-Si-(CH₃)₃ group.
11. A method for modifying the wetting properties of a printing form having a surface with inorganically bonded silicon, the method comprising the steps of:
 - bringing the surface into a first chemical state having a first wetting property;
 - bringing a portion of the surface into a second chemical state having a second wetting property by modifying chemical terminal groups of the surface;
 - organic terminal groups being attached to silicon atoms at an hydrophobic area of the surface in such a way that the silicon atoms are substituted not only exactly with one CH₃ group or with one OCH₃ group.
12. The method as recited in claim 11 wherein either the first wetting property is hydrophilic and the second wetting property hydrophobic, or the first wetting property hydrophobic and the second wetting property hydrophilic.
13. The method as recited in claim 11 wherein the surface is amorphous, contains nanocrystalline, polycrystalline or crystalline silicon, or is a stoichiometric or non-stoichiometric silicon ceramic with oxygen and/or nitrogen.
14. The method as recited in claim 11 wherein, in at least one of the hydrophobic areas, unsubstituted and/or partially chlorinated and/or completely chlorinated and/or partially fluorinated and/or completely fluorinated alkyl terminal groups are attached as organic terminal groups.

15. The method as recited in claim 14 wherein, in at least one of the hydrophobic area, chains of a plurality of carbon atoms, to which CH₃ or CF₃ groups are attached, are attached as organic terminal groups.
16. The method as recited in claim 11 wherein the second chemical state is brought about by localized processing using a controlled light source so that the second chemical state corresponds to an image information to be printed or to a negative of the image information to be printed.
17. The method as recited in claim 12 wherein the chemical state having hydrophilic wetting properties is achieved by thermal heating or photochemically.
18. The method as recited in claim 11 wherein aryl groups and/or alkyl groups and/or fluoralkyl groups and/or chloroalkyl groups are attached to the surface via an Si-C bond through photoinitiation of halogenosilanes, alcohols, alkenes or alkynes.
19. The method as recited in claim 11 wherein the organic terminal groups are attached through reaction with iodoform and/or trimethylenemethane derivatives and/or methylenecyclopropane derivatives and/or 1,1-dialkoxy-2-methylenecyclopropane (DMCP) and/or trimethylsilyl derivatives.
20. The method as recited in claim 19 wherein the trimethylsilyl derivative is hexamethyldisiloxane or hexamethyldisilazane.
21. The method as recited in claim 11 wherein aryl groups and/or alkyl groups are attached to the surface via an Si-O-C bond as a result of reactions of primary alcohols and/or secondary alcohols and/or aldehydes.
22. The method as recited in claim 21 wherein the reaction is initiated and/or accelerated by the action of light.
23. The method as recited in claim 11 wherein alkyl groups are attached to the surface via an Si-O-Si-C bond through reaction with alkylalkoxysilanes, alkylaminosilanes and/or alkylchlorosilanes.

24. The method as recited in claim 23 wherein the alkyl groups are attached via an Si-O-Si-C bond through reaction with alkyltrimethoxysilanes and/or fluoroalkylmethoxysilanes.

25. A printing form comprising:

a surface having inorganically bonded silicon and a pattern composed of hydrophilic and hydrophobic regions, the hydrophilic regions having a first chemical state and the hydrophobic regions having a second chemical state differing from the first state;

at least one of the hydrophobic regions having silicon atoms at the surface having at least one organic terminal group attached thereto, the at least one organic terminal group including one of: at least one organic group other than CH₃ and OCH₃; a CH₃ group and at least one further organic group; and OCH₃ and at least one additional organic group.